FOOD AND NUTRITION I

Levels: 9-12
Units of Credit: .5
CIP Code: 20.0108
Prerequisite: None

COURSE DESCRIPTION

FOOD AND NUTRITION I (.5 credit) This course is designed for students who are interested in understanding the principles of nutrition and in maintaining a healthy life style. Attention will be given to the selection and preparation of food and personal health and well-being. (Standards 1-6 will be covered on Skill Certification Test # 340.)

CORE STANDARDS, OBJECTIVES, AND INDICATORS

STANDARD

20.0108-01 Students will apply the skills of kitchen equipment and management.

OBJECTIVES

20.0108-0101 Identify and explain the appropriate use and care of selected kitchen equipment.
- Locate food preparation equipment in the laboratory
- Identify various types of kitchen equipment
- Select appropriate equipment for specific product preparation
- Use various types of food preparation equipment
- Demonstrate the proper use and care of equipment
- Employ standard safety procedures when using equipment

20.0108-0102 Explain the basic principles of cooking in a microwave.
- Identify that microwaves are attracted to fat, sugar, and water molecules
- Explain basic microwave cooking rules
- Identify how microwaves cook food
- Identify appropriate cooking containers
- Discuss cooking time, standing time and ways to increase even cooking
- Discuss prevention of burns and exploding or splattering of food

20.0108-0103 Identify appropriate abbreviations, food-measurement terminology, techniques, equivalents, and calculate recipe-size adjustments and demonstrate proper measuring techniques.
- Identify abbreviations
- Compute equivalents
- Identify measuring techniques and utensils
- Double and cut recipe size in half
- Consistently demonstrate proper measuring and preparation techniques

20.0108-0104 Explain basic food-preparation terminology.
- Identify terms to include: chop, cream cut in, dice, flour, fold in, grate, knead, mince, peel, sauté, simmer, steam and whip

STANDARD
20.0108-02 Students will consistently demonstrate kitchen safety procedures and sanitation techniques.

OBJECTIVES

20.0108-0201 Apply established safety rules and guidelines to maintain a safe working environment.
National Standard 14.4.1
- Identify safety practices for using electric appliances
- Explain how to extinguish a grease fire
- Explain why cleaning supplies should be stored away from foods
- Discuss ways to prevent burns, fires, falls and electrical safety

20.0108-0202 Identify proper first-aid procedures for cuts, burns, and electrical shock.
- Identify ways to prevent poisoning and chemical contamination
- Identify basic first-aid for cuts and burns
- Identify proper first-aid procedures for electrical shock

20.0108-0203 Identify and apply sanitation rules and guidelines.
National Standard 14.4.1
- Identify proper hand washing and dishwashing techniques
- Discuss disinfecting of work surfaces
- Discuss appropriate use of gloves
- Identify appropriate clothing and hair coverings
- Discuss the danger of mixing cleaning chemicals (i.e. ammonia and chlorine bleach)

20.0108-0204 Identify methods that prevent food-borne illnesses and contamination.
National Standard 14.4.1
- Identify food-borne illness
- Identify types of food-borne illness and their symptoms: botulism, e-coli, hepatitis, salmonella, staphylococci
- Explain prevention techniques
- Identify temperature zones and the importance of cooking to proper temperatures
- Identify temperature zones and the importance of cooling and reheating foods to the correct temperature
- Explain how to correctly thaw foods

STANDARD
20.0108-03 Students will explore the dietary guidelines and food guide pyramid.

OBJECTIVES

20.108-301 List the **nine** recommended dietary guidelines and ~~**explain their function and implementation.**~~ **the key recommendations for each. See www.healthierus.gov/dietaryguidelines**
(The guidelines are listed below)
National Standards 14.3.1

1. **Adequate nutrients within caloric needs.**
2. **Weight Management.**
3. **Physical Activity.**
4. **Food Groups to Encourage.**
5. **Fats**
6. **Carbohydrates**
7. **Sodium and Potassium**
8. **Alcoholic Beverages**
9. **Food Safety**

~~(TEACHER RESOURCE: See the following website for additional information: http://www.usda.gov/cnpp~~

20.0108-0302 Demonstrate knowledge of ~~servings,~~ serving sizes, and food sources related to **my** ~~the food guide~~ pyramid.
National Standard 14.3.1 **See my pyramid.gov**
- Explain how all food groups are important to good health and one group cannot replace another
- Identify the nutrients provided by each group
- **Explain discretionary calories**.
- ~~Identify the recommended number of daily servings from each food group~~
- Explain how people have different needs for calories and nutrients depending upon their age, gender, body size, and activity level

20.0108-0303 Students will evaluate their diets using the dietary guidelines and their **my** pyramid.
National Standard 14.3.1 **See my pyramid.gov**

STANDARD
20.0108-04 Students will identify the sources and function of carbohydrates and fiber and apply appropriate food preparation techniques.

OBJECTIVES
20.0108-0401 Identify carbohydrates, their sources, and functions **and the importance of whole grains** in the body.
National Standard 14.2.1
- Define simple and complex carbohydrates
- Identify function and sources of simple and complex carbohydrates
- Describe how carbohydrates are broken down during the digestion process

20.0108-0402 Identify fiber, its sources and functions.
National Standard 14.2.1
- Identify the function of fiber
- Identify cellulose - non digestible fiber
- Discuss the importance of liquids in the role of bowel function
- Discuss why the National Cancer Institute recommends 20-35 grams of daily fiber
- Identify foods high in natural fiber, and how to increase the bulk in low-fiber foods

20.0108-0403 Apply food selection and preparation guidelines related to quick breads, rice, grains, and pasta.
National Standard 14.3.3
- Identify basic cooking techniques related rice, grains, and pasta
- Identify examples of quick breads: muffins, pancakes, waffles, biscuits, corn bread, nut/fruit bread, popovers
- Identify the role of each ingredient contained in quick breads
- Actively participate in the preparation of quality complex carbohydrate food product(s)

STANDARD
20.0108-05 Students will identify the sources and functions of proteins and fats and apply appropriate food preparation techniques.

OBJECTIVES

20.0108-0501 Identify proteins (complete and incomplete), their sources, and functions in the body.
National Standard 14.2.1

- Define amino acids, complete and incomplete proteins.
- Identify examples of complete and incomplete proteins.
- Identify the function of protein in the body.

20.0108-0502 Apply food selection and preparation guidelines related to egg products.
National Standard 14.3.3

- Identify functions of eggs: binder, thickener, coating, leavening agent, emulsifier
- Identify egg cooking temperatures, techniques/methods: hard cooked, scrambled, fried, and poached.
- Identify egg cooking temperatures, techniques/methods: hard cooked, soft cooked, scrambled, fried, and poached.
- Identify the process of beating egg whites
- Identify stages of beaten egg whites: foam, soft peaks, and stiff peaks
- Identify appropriate storage of eggs
- Prepare a protein food product

20.0108-0503 Apply food selections and preparation guidelines related to milk and milk products.
National Standard 14.3.3

- Define pasteurization and homogenization
- Identify methods of lowering fat in recipes by using a lower fat content milk or milk product
- Prepare a low-fat milk-based product.

~~**Create a white sauce**~~

20.0108-0504 Identify fats, their sources, function, and related health concerns.
National Standard 14.2.1

- Identify the functions of fats: carrier for vitamins A, D, E, and K, reserve supply of energy; adds flavor in food; satisfies hunger, protects internal organs from shock and injury, insulates the body from shock and temperature changes
- Explain the role of cholesterol including HDL and LDL factors

Identify the differences between saturated, mono-unsaturated, poly-unsaturated fats, **and trans-fatty acids.**

STANDARD
20.0108-06 Students will identify the sources, function of vitamins, minerals and water and apply appropriate food preparation techniques

OBJECTIVES

20.0108-0601 Identify vitamins, their sources, functions, and deficiencies in the body.
National Standard 14.2.1

- Identify the body processes that are regulated by vitamins; for example, nerves, muscles and skin--all require vitamins to function properly.
- Discuss the importance of folate (folacin/**folic acid) in preventing neural tube birth disorders.**
- Identify water soluble vitamins—C and B (thiamin, riboflavin, niacin, folate (folacin/folic acid).
- Identify fat soluble vitamins—A, D, E, and K.

20.0108-0602 Identify minerals, their sources, functions, and deficiencies in the body.
National Standard 14.2.1
- Discuss macro minerals, electrolytes, and trace minerals.
- Identify the problems associated with calcium and iron.

20.0108-0603 Identify the functions of water in the body.
National Standard 14.2.1
- Identify the functions of water.
- Discuss why water is the most important of all the essential nutrients.
- Identify daily recommendation of water.
- Identify symptoms of dehydration and how to prevent it.

20.0108-0604 Apply food selection and preparation guidelines related to fruits and vegetables.
National Standard 14.3.3
- Identify the nutrients provided by vegetables.
- Identify how to preserve nutrients in the food preparation process.
- Discuss how air, heat and water destroy nutrients.
- Identify common preparation methods for vegetables: micro cooking, bake, steam, stir fry, simmer, sauté.
- Identify how to select fresh fruits and vegetables.
- Identify appropriate storage for fruits and vegetables.
- **~~Identify serving sizes of fruits and vegetables~~**
- Discuss how to prevent oxidation of fresh fruits.
- **~~Identify fruits and vegetables that are low in fat and sodium and high in fiber~~**
- Prepare vegetable and fruit food product(s).